Process Mining Online Assessment Data
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**Process Mining** focuses on the development of a set of intelligent tools and techniques aimed at extracting process-related knowledge from event logs recorded by an information system.

- **conformance checking** - reflecting on the observed reality, i.e. checking whether the modeled behavior matches the observed behavior;
- **process model discovery** - constructing complete and compact process models able to reproduce the observed behavior,
- **process model extension** - projection of information extracted from the logs onto the model, to make the tacit knowledge explicit and facilitate better understanding of the process model.

**Case Studies with ProM**

**Online confidence-based assessment:**
- a series of the multiple-choice question tests,
- with strict order vs. flexible navigation.

**Collected Data:**
- correctness, certitude, time spent for answering;
- **strict-order navigation**: feedback requests, time spent for studying feedback;
- **flexible-order navigation test**: how many times a question/answer was skipped and/or revisited.

**Dotted Chart Analysis**

Case of flexible order navigation. Each dot corresponds to a certain event in the log. Left figure - all events, right figure - highlight of the revisions

**Process discovery with Heuristic nets**

Heuristic nets of strict order (left) and of flexible order (right) tests

**Future work**: development of
- **EduProM plugins** to bring process mining tools closer to the domain experts and better address some of the EDM specific challenges related to data (pre)processing and mining;
- **Authoring tools** pluggable to popular LMS and facilitating use of EduProM.